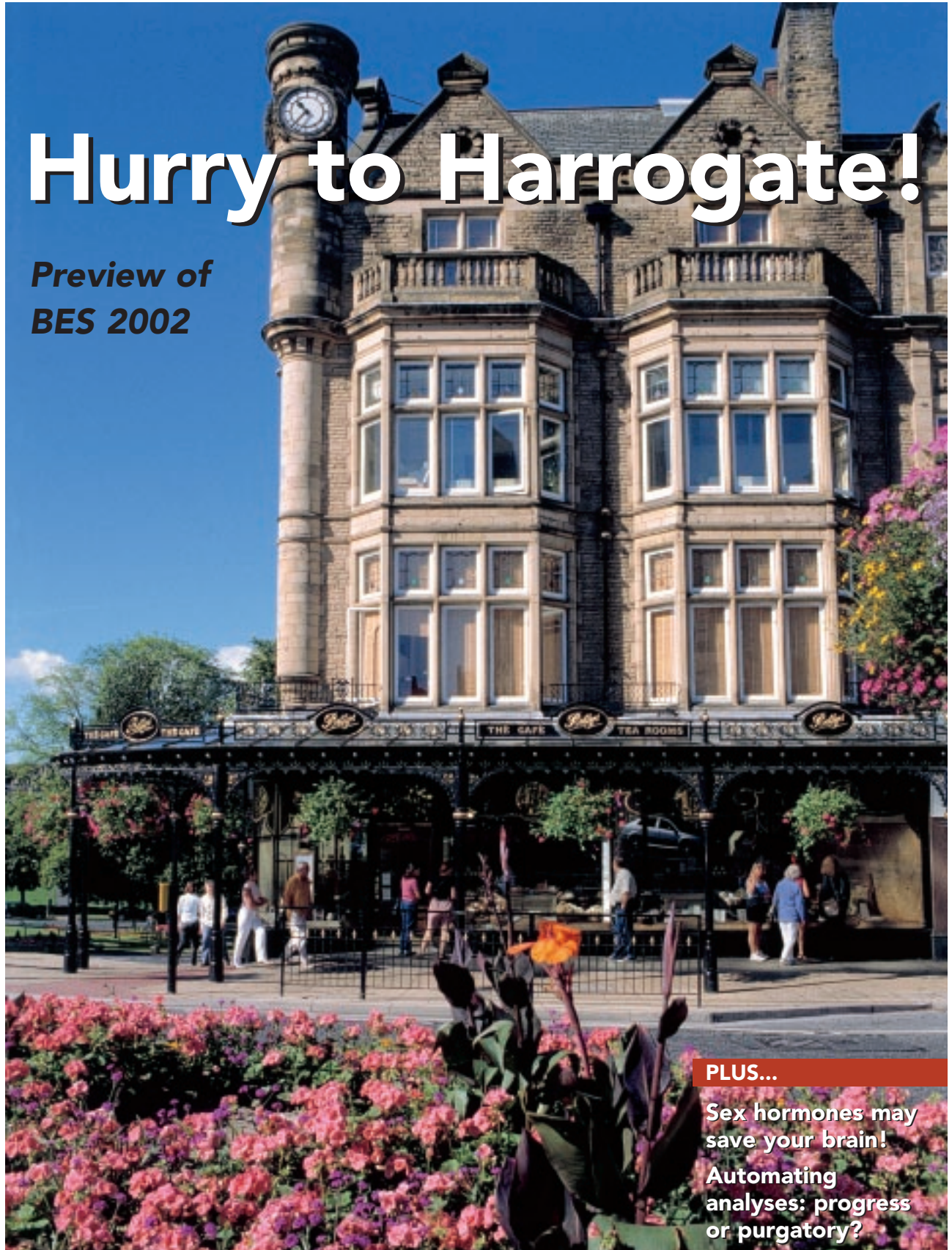


# THE **Endocrinologist**

## Hurry to Harrogate!

*Preview of  
BES 2002*



**PLUS...**

**Sex hormones may save your brain!**

**Automating analyses: progress or purgatory?**

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Advertise your event in *The Endocrinologist*!  
Members: Mono - Half page £100 Full page £150  
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Deadline for news items for  
the Summer 2002 issue: **22 March 2002**.  
Please send contributions to the above address.

It's all change at *The Endocrinologist*. Ann Logan has completed her term as Editor, and, furthermore, I am delighted to welcome our new Associate Editor, Saffron Whitehead. I would like to take this opportunity to thank Ann for her enormous contribution to *The Endocrinologist*, and for teaching me the ropes so gently. There is no doubt that the content, articles, and illustrations have all been very colourful during Ann's time, and she has introduced many innovations, especially the themed special issues.

This issue is more philosophical than most. Our two feature articles tackle big issues of general interest. Lisa Melton from the Novartis Foundation has written a 'punchy' article about the potential of oestrogen as the ultimate antioxidant (page 10). She discusses the work of Dr Christian Behl (a neurobiologist at the Max Planck Institute in Munich), who has suggested that a designer version of oestrogen could provide the magic bullet to prevent dementia.

On page 11, Ray Edwards also waxes philosophical when he discusses automation in hormone analysis. I am not sure whether he is comparing medicine with science when he says, 'Knowledge can be defined simply as finding the unity in diversity. In practice, this is essentially a passive process. In contrast, the art of applying knowledge to a specific event is the realm of technology, and is much more active'.

Webspinning is always a popular feature. In her article on page 7, Melissa Westwood is almost poetic about three web sites which will provide everything you need, from teaching to just gazing. Meanwhile, pages 8 and 9 give a mouth-watering summary of the likely highlights of BES 2002 in Harrogate. You can't afford to miss it!

As always this edition is packed with useful and interesting information - so read on...

RICHARD ROSS



**2002**

**N**

THE 5th INTERNATIONAL CONGRESS OF  
**NEUROENDOCRINOLOGY**

**BRISTOL • UK**

31 August -  
4 September 2002

Contact Victoria Withy at BioScientifica for details  
Tel: 01454-642210 Email: ICN2002@endocrinology.org  
Web: [www.bioscientifica.com/icn2002.htm](http://www.bioscientifica.com/icn2002.htm)

## SOCIETY CALENDAR

8-11 April 2002

**BES 2002**

Harrogate, UK

*(see feature on pages 8 and 9)*

9-12 July 2002

**Summer School 2002**

Reading, UK

*(see advert on page 6)*

9-11 September 2002

**Endocrine Nurses Training Course**

Cambridge, UK

*(see details on this page)*

4-6 November 2002

**193rd Meeting of the Society for Endocrinology**

London, UK

## Election results

The following members were elected as the Society's new officers at December's AGM. They will serve for 3 years with effect from the 2002 AGM:

**Professor Steve Bloom** - Chairman

**Professor John Wass** - General Secretary

**Professor Ann Logan** - Programme Secretary

**Professor Anne White** has now taken over from Professor Julia Buckingham as Treasurer and will serve for 5 years.

**Dr Robert Abayasekara**, **Dr Joy Hinson** and **Professor Phil Lowry** were elected as new Council members with immediate effect. Their term of office is 4 years.

Our thanks go to Professor Ashley Grossman, Professor Paul Stewart and Professor Gavin Vinson, who are retiring from Council.

## Endocrine Nurses news

**Diary dates** The Nurses Session at BES 2002 in Harrogate is entitled 'Advances in diagnostic imaging', and will take place on Wednesday 10 April at 3 pm. This year's Endocrine Nurses Training Course 'Endocrine nasties: investigations and treatment options for endocrine malignancies', will be held in Cambridge on 9-11 September. Further details and registration forms are available from Ann Lloyd in the Bristol office ([ann.lloyd@endocrinology.org](mailto:ann.lloyd@endocrinology.org)).

**Newsletter** The first edition of 'Endocrine Nursing News' will be mailed out in the next few weeks. It will keep you in touch with your Committee, and let you know what we are doing on your behalf. Details of forthcoming courses and study days, profiles of endocrine nurses and advertisements for vacancies will make this newsletter a valuable resource. Please feel free to write in with suggestions, letters etc. If you do not receive a copy, please contact Ann Lloyd to ensure that your details are on our mailing list.

MAGGIE CARSON

We are pleased to announce that Maggie Carson is the new Chair of the Nurses Committee. Our thanks go to retiring Chair, Mavis Harris.

## New Corporate Member

Welcome to Genzyme Therapeutics, who have recently joined the Society as a Corporate Member. Genzyme produces products for thyroid cancer.

### SIGNALLING THE FUTURE - 1902-2002

#### Liverpool, UK, 3-6 September 2002

*A celebration of the centenary of the UK's first  
Department of Biochemistry, at the University of Liverpool*

The Society for Endocrinology is pleased to sponsor  
a session entitled **Nuclear Receptors in Endocrine Systems**

Chair: **Malcolm Parker** (London, UK)

Speakers:

Erich Greiner (Heidelberg, Germany)

*Molecular genetic analysis of glucocorticoid and mineralocorticoid signalling in mice*

Rod Hubbard (York, UK)

*Structural aspects of oestrogen receptors and their cofactors*

Krish Chatterjee (Cambridge, UK)

*Clinical syndromes arising from mutant thyroid hormone and PPAR receptor genes*

James Liao (Boston, USA)

*Cross-coupling between oestrogen receptor and PI3 kinase signalling*

Further information about the meeting can be found at: [www.signal2002.com](http://www.signal2002.com)

## Book token winner!

The winner of the £50 book token for recruiting the most new Society members in 2001 was Dr Joanne Heward from the Queen Elizabeth Hospital in Birmingham.

## Members on the move...

**F Bayraktar** to Dokuz Eylul

University, Turkey; **G M Besser** to

The London Clinic; **D Deepak** to

Warrington General Hospital;

**L C Lai** to Sesama Centre, Malaysia;

**P Narendran** to Walter and Eliza Hall

Institute, Australia; **A C J Robinson** to

Oldham Royal Hospital.

## Sorry

We omitted to mention that 'Shakespeare and Medicine, Twins and Siblings', as featured in the last issue, was a Royal Society of Medicine meeting in full collaboration with Patrick Spottiswood of Globe Education. The cover photograph for the last issue was reproduced by kind permission of the Globe Theatre. We apologise for this omission.

# Regional Co-ordinators

Our Regional Co-ordinators scheme aims to ensure that Society information is available in all major centres throughout the UK and Ireland, so strengthening the specialism by increasing membership, and also encouraging feedback.

We are pleased to introduce the Society's eight Regional Co-ordinators, who are now in place. They have worked hard to recruit Local Co-ordinators at the major institutions in their regions, but there are still a few vacancies. If you feel that you could help by handing out literature and displaying an A4-sized poster, please contact Julie Cragg in the Bristol office, to see if there is a vacancy at your institution.



**London:**  
Dr Graham Williams, Hammersmith Hospital, London



**Northwest and North Wales:**  
Dr Jiten Vora, Royal Liverpool University Hospital, Liverpool



**Midlands and East Anglia:**  
Dr Rose Bland, University of Warwick, Coventry



**Scotland:**  
Dr Henry Jabbour, Centre for Reproductive Biology, Edinburgh



**Northeast:**  
Professor Colin Ingram, Royal Victoria Infirmary, Newcastle upon Tyne



**South and Southeast:**  
Dr Neil Hanley, Southampton General Hospital, Southampton



**Northern Ireland and Eire:**  
Dr Patrick Bell, Royal Victoria Hospital, Belfast



**Southwest and South Wales:**  
Dr Bronwen Evans, University of Wales College of Medicine, Cardiff

## ENDOS' INTERESTS

### Bees keep you busy!



**B**ees live 60 000 strong in cities, ruled by a single queen, without our need for committees and councils! The fun of bee keeping is learning how the hive works, and making more honey by helping with the 'housework' - my average per year is 60-100 lbs. There's the added excitement of chasing swarms around the countryside, carrying a full hive in your car, or having a bee in your hair.

The frame pictured here shows covered 'brood' cells in the centre, a crescent of light honey-containing cells at the top, and worker bees busy over the open cells where the queen has laid or will lay her eggs. The two finger-like projections in the middle at the top are queen cells, where eggs fed on royal jelly have turned into queen larvae. This year I had a New Zealand queen sent in the post. She arrived safe and sound in a matchbox sitting on a pellet of candy with two workers. She is the calmest bee I have ever handled, and I can strongly recommend the Kiwis to anyone planning to take up bee keeping.

RICHARD ROSS

*Do you have an unusual hobby that you think others might enjoy reading about? Send your contributions to the Editor.*

# Young Endos - your shout!

**You've undoubtedly heard of us, you've probably seen us, you may even know one of us... But just what is a 'Young Endocrinologist'? And what do we do?**

In fact, more than 130 Society members are registered as Young Endocrinologists - a number that grows yearly. Many of you have attended our sessions at the Society and BES meetings and Summer Schools, but you may still be wondering what we are aiming to achieve.

The Young Endocrinologists aim to serve the needs of the younger Society members in the period up to 6 years post-PhD/MD/MRCP. Our purpose is to represent the views and needs of both clinical and basic scientists. The Society actively seeks out the opinion of their Young Endocrinologists, and supports the initiatives.

However, without fresh input from our members, we will fail to function as well as we might. We need to know your ideas, suggestions, or gripes(!), so

that we can address the problems that young scientists face when starting a career that has no career structure.

Past sessions have included Managing your PhD, Alternative careers to academia, Working overseas and How to write a good grant. We've had our own highly successful session at both the Society's 2000 and 2001 meetings, and initiated the Basic Science Review Lecture (more information below). What else would you suggest? What else would you like?

Get involved. Come to the Young Endocrinologists social events at the BES (and regret it the next morning!), participate in the Summer School (at least once), use the Mailbase discussion list. The Society is investing in us for its future, so we should invest in our Society.

ROB FOWKES  
YOUNG ENDOCRINOLOGISTS CHAIRMAN

## Young Endos Basic Science Review Lecture

**Applications are invited from basic scientists who are no more than 6 years post-PhD to present a 30-minute review lecture on any endocrine subject. This will probably relate to an area of personal research, either in progress or recently completed.**

The successful applicant will present their lecture during the Society's annual meeting on 4-6 November 2002 at the Royal College of Physicians in London, and will receive a £500 honorarium from the Society.

Applicants must be members of the Society and under 35. Older applicants may be considered if there are extenuating circumstances (which

should be stated if relevant). Abstracts should be submitted on a single A4 sheet, accompanied by a mini-CV on a second A4 sheet. The latter should include your date of birth and up to five publications of relevance to the lecture topic. Please also supply the name, address, telephone number and email address of your head of department to assist in the selection process. Applications should be sent to Julie Cragg in the Bristol office by **28 June 2002**.

The Society's Awards Committee will judge submissions using the standard criteria of originality, scientific quality and general relevance/impact.

## Young Endocrinologist initiatives:

- Placement service at Society meetings, enabling supervisors who have 'situations vacant' to meet up with potential applicants for mini-interviews.
- Web-based information on career opportunities
- Provision of a basic science syllabus
- Promotion of endocrinology as a career
- Increasing public awareness of our speciality
- Improving the scientist-clinician relationship

## Young Endo grants

Grants of up to £150 are available for Young Endocrinologists who wish to attend the **Molecular Endocrinology Workshop at Summer School 2002** in Reading on 9-12 July (deadline for applications: 28 June 2002; see the advert on page 6 for details of the event). In addition, ten grants of up to £150 are available to attend the **5th International Congress of Neuroendocrinology** in Bristol on 31 August-4 September (deadline: 19 August 2002; see the advert on page 2). Both application forms can be obtained from [www.endocrinology.org/sfe/grants.htm](http://www.endocrinology.org/sfe/grants.htm) or by contacting Christine Davis in the Bristol office ([info@endocrinology.org](mailto:info@endocrinology.org)).

The grants are available to UK-based Young Endocrinologist members of the Society, who do not work within a 25-mile radius of the event venues. Applicants must be less than 6 years post-PhD/MD/MRCP and have signed up with the Young Endocrinologists discussion list. (To join this list, email: [young-endocrinologists-request@mailbase.ac.uk](mailto:young-endocrinologists-request@mailbase.ac.uk).) The grants are in addition to the annual overseas conference grants for which all Society members are entitled to apply.

## Simpson Fellowships

Applications are invited for Samuel Leonard Simpson Fellowships in Endocrinology. These will enable endocrinologists to learn new techniques and acquire new experience, ideas and stimulation by travel and exchange of views. In doing so they will honour the name of Dr Samuel Leonard Simpson, a pioneer of British endocrinology. Applications will be considered from suitably qualified individuals in the UK wishing to make visits abroad, or from those abroad wishing to visit the UK. The closing date for applications is **1 July 2002**.

Application forms and further details are available from: The Academic Registrar, Royal College of Physicians, 11 St Andrews Place, Regent's Park, London NW1 4LE, UK (Tel: 020-79351174 ext 436/300/252; Fax: 020-72240719; Email: conferences@rcplondon.ac.uk).

## New thyroid cancer guidelines

Despite advances in diagnostic methods, surgical techniques and clinical care, the outcome for thyroid cancer patients appears to be worse in the UK than elsewhere in Western Europe. The reasons for this are unclear, but the publication of new guidelines for management of thyroid cancer - and their implementation through local protocols - will hopefully lead to an improvement in survival for patients in England and Wales.

The guidelines are being published jointly by the British Thyroid Association and the Royal College of Physicians, and are accompanied by specially written information for patients on tests and treatment, thyroid surgery and radioactive iodine ablation treatment. For an order form, please contact the Royal College of Physicians (Tel: 020-79351174 ext 358; Email: publications@rcplondon.ac.uk).

## Life Sciences Directory

The 2001-2002 directory lists members of the Society for Endocrinology, the Biochemical Society, the British Society for Cell Biology, the Nutrition Society and the Physiological Society. It is available online at [www.lifescientists.org](http://www.lifescientists.org). Please send £2.00, payable to the Society for Endocrinology, to Christine Davis in the Bristol office if you would like a printed copy.

2002  
**SUMMER  
SCHOOL**



**9-12 July 2002**  
**Reading University**

The Society is pleased to announce its third Summer School, which will include:

- Molecular Endocrinology Workshop (9 July)
- Advanced Endocrine Course (10-11 July)
- Clinical Practice Day (12 July)

**Grants of up to £150 are available to UK-based Young Endocrinologist members to attend Tuesday's Molecular Endocrinology Workshop. See page 5 for further details. (This will not affect your eligibility to apply for an annual overseas conference grant.)**

Summer School details available from Ann Lloyd in the Bristol office ([ann.lloyd@endocrinology.org](mailto:ann.lloyd@endocrinology.org))



## Institute of Biology

The Institute's Biomedical Science Committee will have a vacancy from Spring 2002. The term of office for the post is 3 years. If you would like to be considered, email a CV and brief letter to [j.cowie@iob.org](mailto:j.cowie@iob.org), setting out your experience.

## NICE update

The National Institute for Clinical Excellence's work programme can be found at: [www.nice.org.uk](http://www.nice.org.uk). Some of the programme is listed below, with launch dates where known.

### Clinical guidelines

- Urological cancer (service guidance) *January 2002*
- Type II diabetes *Spring 2002*
- Breast cancer (service guidance) *July 2002*
- Acute head injury *Autumn 2002*
- Eating disorders *Spring 2003 (tbc)*
- Type I diabetes *Summer 2003*
- Depression *July 2003 (tbc)*
- Hypertension *(tbc)*
- Infertility *(tbc)*
- Genetic risk of familial breast cancer *(tbc)*
- Epilepsy *(tbc)*
- Cancers of children and adolescents (service guidance) *(tbc)*
- Parenteral nutrition in pre-term infants (prospective clinical audit) *(tbc)*

### Technology appraisals

- Human GH in children and adults *April/July 2002*
- Caelyx (pegylated liposomal doxorubicin hydrochloride) for ovarian cancer *May 2002*
- Surgery for morbid obesity *June 2002*
- Long-acting insulin analogues for diabetes *December 2002*
- Rosiglitazone and pioglitazone for type II diabetes *March 2003 (tbc)*
- Patient education models for diabetes *March 2003*
- Capecitabine for breast cancer *March 2003*
- Insulin pump therapy *April 2003*
- Prevention and treatment of osteoporosis *June 2003*

# Webspinning

Highlighting the best on the Web

## Teaching aids

[www.merlot.org/Home.po](http://www.merlot.org/Home.po)

This site is potentially useful to teachers of science or medical undergraduates. You can crib anatomy images and macromolecular structures to illustrate your lectures, and point students towards interactive and animated tutorials to help reinforce difficult concepts. Topics range from frog heart physiology to the principles of PCR and microarray. The site also provides links to other searchable databases, so there should be something for everyone!

SERVICES: D, L; STRONG POINTS: Good broad coverage; WEAK POINTS: Main site isn't searchable; RATING: Very good.

## Handbook of Acromegaly



A complete and up-to-date review of acromegaly, covering all aspects of the subject and comprising contributions from many of the

world's leading researchers on the subject from the USA and Europe. This book will be invaluable for clinicians, clinical researchers, lecturers, registrars and nurses working in endocrinology and internal or general medicine.

**Ed J Wass, £24.95, \$49.95 (members' price £18.75), paperback, 97 pp, ISBN 1901978117**

To place your order or for further information contact:

BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK

(Tel: 01454-642240;

Fax: 01454-642222;

Email: [sales@endocrinology.org](mailto:sales@endocrinology.org);

Web: [www.bioscientifica.com](http://www.bioscientifica.com))



**BioScientifica**

## Protein gazing

[dodo.cpmc.columbia.edu/predictprotein](http://dodo.cpmc.columbia.edu/predictprotein)

Here's a site that's likely to come into its own now that the human genome has been sequenced. Simply submit your protein sequence, sit back, and wait for information on sequence alignments, functional motifs, nuclear localisation signals and the predicted secondary structure to be delivered to your desktop.

SERVICES: T, D, S; STRONG POINTS: Easy to use; WEAK POINTS: None; RATING: Excellent.

## Charting pathways

[www.biocarta.com/genes/index.asp](http://www.biocarta.com/genes/index.asp)

Ever wanted to draw out a pathway but didn't have the time, energy or Powerpoint skills? Then check out this site to see if someone's already done it for you. Here you can download colour diagrams of pathways relating to adhesion, apoptosis signalling, metabolism and much else besides.

Some are cared for by a 'guru' who will answer questions on that pathway, and each also has a discussion board. SERVICES: D, S, O; STRONG POINTS: Easy to use, time-saving; WEAK POINTS: 'Gurus' missing from some pathways; RATING: Good.

Thanks to Kevin Ahern and *Genetic Engineering News*. Don't forget to visit the Society for Endocrinology on the Web: [www.endocrinology.org](http://www.endocrinology.org); tell us about your favourite Web site: [melissa.westwood@man.ac.uk](mailto:melissa.westwood@man.ac.uk).

### KEY

Services provided at Web sites:

- T Tools - Analytical computing tools
- D Data - Searchable or downloadable database information
- G Goods - FTP delivery of useful items (e.g. full package, bug fix or demo software)
- L Links - Useful links to other sites
- N News - News of interest
- S Support - Feedback in response to users' enquiries
- O Others - e.g. Innovative use of Web tools, appearance, editorial point of view

**Ratings:** Excellent, Very Good, Good  
*Nothing below good will be reported here.*

# Trinity China Challenge

Clapham's 110-year-old Trinity Hospice is appealing to you to 'get on your bike!' The Trinity China Challenge is a special fund-raising event to enable the Hospice to continue caring for its patients. The Challenge will take place between 5 and 14 October 2002, and is a 450 km cycle ride taking in the Beijing area and the Great Wall of China. Further information is available from Gay Rose at 01462-634646 or [gay@actionforcharity.co.uk](mailto:gay@actionforcharity.co.uk).

## 100 years of adrenaline

Adrenaline, the first hormone to be obtained in pure form, was isolated a century ago. The work was carried out by the Japanese scientist Jokichi Tokamine and his assistant Keizo Uenaka.

Takamine's story is a fascinating one. From an interest in fertilisers that developed during his studies in Glasgow, Takamine moved on to work in the American brewing industry, where he was granted the first patent on a microbial enzyme in the USA.

His subsequent work on 'internal secretions' led to the isolation of adrenaline, which was a medical and popular sensation. Physicians carried it in their bags, and Gene Tunney, the champion boxer, was said to keep some on hand when he went into the ring. The drug transformed surgery, where it was used to control haemorrhage. Adrenaline also found uses in cardiology, obstetrics, and the treatment of asthma and other allergies. It was also widely prescribed for several conditions for which it was useless, including goitre, deafness, and Addison's disease.

Members may be interested to read the full story at [pubs.acs.org/subscribe/journals/mdd/v04/i12/html/12timeline.html](http://pubs.acs.org/subscribe/journals/mdd/v04/i12/html/12timeline.html).



21ST JOINT MEETING OF THE

# British Endocrine Societies

8-11 April 2002

**Harrogate International Centre and Majestic Hotel,  
Harrogate, UK**

*Hasten to Harrogate! This blooming city opens its historic gates to the BES once again, to invite endocrinologists from around the world to this culturally rich location, for what promises to be a very exciting conference.*

With our plenary lecturers coming from all over the globe, the BES programme looks set to stimulate your minds and enthusiasm. Professor John Challis, this year's Transatlantic Medal Lecturer, will be flying in from Toronto, Canada, to speak to us about 'Mechanisms of preterm birth, and influences on disease in later life'. Our Dale Lecturer is from Edinburgh, UK. Professor David Baird will talk on 'Darwin, de Graaf and selection of the ovulatory follicle(s)'. 'Molecular genetics of congenital hypothyroidism' is the subject chosen by this year's British Thyroid Association Pitt-Rivers Lecturer, Professor Roberto Di Lauro from Naples, Italy. Meanwhile, travelling from Bethesda, USA, Professor George Chrousos will discuss the 'Neuroendocrinology of stress' as the Clinical Endocrinology Trust Visiting Professor. Professor Paul Stewart from Birmingham, UK, will deliver the Clinical Endocrinology Trust Lecture, intriguingly titled 'The apple of my eye' - come along to learn more!

As expected, the symposia will provide a rich and enticing programme, covering both basic and clinical aspects of the latest cutting edge work in endocrinology.

Clinical management workshops will focus on new treatments in osteoporosis, adolescent diabetes, thyroid hormones and the pituitary gland.

Professor Alastair Aitken from Edinburgh, UK will lead us into 'Proteomics' for the molecular endocrinology workshop, and 'Patenting is bad for science' is sure to provide a lively debate on Thursday morning.

The 'What would the Expert do?' sessions should prove as popular as ever, with topics including 'Abnormal thyroid in pregnancy', 'New imaging techniques', 'Ovulation induction', 'DNA analysis', 'Gene transfer', 'Replacing testosterone', 'Obesity' and 'Addison's'.

A superb programme of social events complements this full and varied scientific programme. Harrogate is a fantastic venue for the meeting, with its historic charm, style and elegance. BES 2002 should not be missed!



# Historic Harrogate

*Famous for its floral beauty and elegance, Harrogate is a thriving city. Delegates at BES 2002 will be treated to a town full of history and rich culture, as well as a modern and cosmopolitan atmosphere. Harrogate International Centre is acknowledged to be one of Europe's most important and influential conference and exhibition venues, and has been the home to previous successful BES meetings. The 19th century Majestic Hotel will also host some of the scientific sessions. Harrogate is located centrally between London and Edinburgh, and is an equal distance from the east and west coasts, so making it a perfect location for our BES members.*



## SOCIAL EVENTS

### MONDAY

BES Golf Tournament, at Oakdale Golf Club, an historical course, established in August 1914

Inaugural BES Football Five-a-side Tournament at Killinghall Moor

Welcome Reception at the Harrogate International Centre

Young Endocrinologists Evening at *Parisa Café*, with a champagne reception, followed by dinner and a disco

### WEDNESDAY

BES Banquet at the Old Swan Hotel, the place of Agatha Christie's famous 'disappearance'. Dinner and disco plus entertainment from a magician, a caricaturist and our after-dinner speaker, Andy Parker.

Further details from Liz Brookes

BES, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK

Tel: +44-1454-642210; Fax: +44-1454-642222;

Email: [liz.brookes@endocrinology.org](mailto:liz.brookes@endocrinology.org);

Web: [www.endocrinology.org/sfe/confs.htm](http://www.endocrinology.org/sfe/confs.htm)



## HIGH PROFILE PLENARY LECTURERS:

**John Challis** 'Mechanisms of preterm birth and influences on disease in later life'

**Paul Stewart** 'The apple of my eye'

**George Chrousos**  
'Neuroendocrinology of stress'

**Roberto Di Lauro** 'Molecular genetics of congenital hypothyroidism'

**David Baird** 'Darwin, de Graaf and selection of the ovulatory follicle(s)'

### Wide-ranging symposia:

Hormonal control of female reproduction

Recent advances in biological rhythms

Vascular risk in diabetes - genetic and environmental interactions

Differentiated thyroid cancer

Metalloproteinases and their inhibitors: regulators of endocrine activity

Cell-based therapies for treating neuroendocrine disease

Parturition and fetal stress - hormonal strategies for ensuring life after birth

### Key workshops:

Insulin resistance and type 2 diabetes in adolescents and young adults

New treatments for osteoporosis

Unconventional uses of thyroid hormones

Why, why not and when to irradiate the pituitary

Proteomics

### Plus:

Events for Nurses and Young Endocrinologists

Hot debate: patenting is bad for science

See the experts take on abnormal thyroid function in pregnancy, new imaging techniques, ovulation induction, DNA analysis, gene transfer, replacing testosterone, obesity and Addison's in 'What would the Expert do?'

Satellite symposia, social events and much much more!

# Sex Hormones for the Ageing Brain?

**M**ost of us harbour a secret hope of putting ageing on hold, and while some opt for cosmetic surgery, the more faint-hearted dose themselves with antioxidants. Today we find antioxidant vitamins and supplements in everything from food to face creams and shampoo. But for all the promises of anti-ageing drugs and therapies, nothing has yet successfully slowed down the tide of human ageing. One antioxidant could prove to be the exception.

Many scientists now agree that improving the body's defences against harmful free radicals does make sense. The body produces free radicals all the time as cells go about their daily business of producing energy. Over time, these 'polluting' by-products damage DNA and cell membranes in ways that lead to ageing, cancer and degenerative disorders. A mind-boggling range of antioxidants, from vitamins A, E and C to red wine flavonoids and *Ginkgo biloba* extracts, are available that can potentially quench free radicals. Unfortunately, none of these antioxidants has sufficient access to the organ that matters most - the brain.

The latest research reveals that oestrogen - the sex hormone that we usually associate with conception, pregnancy and maternal behaviour - could become the ultimate antioxidant for the ageing brain. Much excitement has surrounded oestrogen, ever since researchers witnessed its ability to pump life into ailing brain cells, reversing the effects of ageing in laboratory rats. In humans, oestrogen has similar capabilities. It can regenerate brain cells, enhance their survival, and act as an overall protective shield.

As a preventive treatment for Alzheimer's disease, oestrogen has yielded spectacular results. According to Dr Victor Henderson, a gerontologist at the University of Southern California in Los Angeles, who compiled the results from 15 different clinical studies 'oestrogen therapy in postmenopausal women may halve the risk of

developing Alzheimer's disease.' The big question is whether oestrogen might do the same for other neurodegenerative diseases.

The brain is particularly vulnerable to internal 'rusting' by free radicals. Although all organisms produce their own supply of antioxidants to mop up harmful free radicals, the brain makes less of these natural antioxidants compared with other tissues. To make matters worse, the brain has a high consumption of oxygen, so nasty molecules are generated at a faster pace. Neuroscientists are now starting to acknowledge that oxidative stress could be heavily implicated in disorders such as Parkinson's disease, Alzheimer's disease, atherosclerosis and stroke.

But why bother with a sex hormone if the widely used antioxidant vitamin E is just as effective? Because vitamin E, also known by its chemical name alpha-tocopherol, is too big a molecule to penetrate the tight network of membranes that envelops the brain, leaving the all-important neurones unprotected. This is a considerable drawback, since few of us would want a youthful body while the mind loses its grip. Some advocate taking vitamin E in larger quantities than the recommended daily dose of 400 IU, to ensure that some gets into the central nervous system. But upping the dose is not advisable, because vitamin E is soluble in fat and can accumulate in the liver, leading to toxicity.

'We are trying to find antioxidants that are even better than alpha-tocopherol,' says Dr Christian Behl, a neurobiologist at the Max Planck Institute of Psychiatry in Munich, Germany. Behl has found that in a culture dish, oestrogen is as efficient at wiping out free radicals as alpha-tocopherol. This is not really surprising, since both molecules have a common 'phenolic ring' structure that is key to their antioxidant action. But in the free radical-busting contest,

oestrogen promises to win hands down because, unlike other antioxidants, it enters the brain freely.

A female sex hormone may be an acceptable treatment for women, but where does that leave men? 'If you are searching for a highly efficient antioxidant you wouldn't choose oestrogen because it has all the hormonal effects,' Behl admits. Men might start to grow breasts, and women might be at risk too, as oestrogen could potentially trigger cancerous cells in the uterus and breast. So Behl has devised a solution: a designer version of oestrogen that retains all its pluses with none of the drawbacks.

To arrive at the ideal designer drug, Behl started small. 'You don't want a huge structure because you want to get it into the brain,' he explains. The phenol ring in oestrogen responsible for free radical scavenging seemed the perfect candidate, and Behl pasted on some bulky methyl groups to stop the molecule from binding hormone receptors. The result is trimethylphenol - a molecule that no longer retains any

*'...oestrogen could become the ultimate antioxidant for the ageing brain'*

hormonal effects. 'That's the trick,' says Behl whose initial results in cell and tissue models of Alzheimer's disease and stroke are very encouraging. But what about side effects? 'The

body is [naturally] full of phenolic compounds, including oestrogen, and I think it can cope well,' says Behl, whose animal studies have already confirmed that this novel compound does indeed make its way into the brain.

Behl envisages a time when both men and women might take such compounds in tablets to keep the brain from ageing, and even to treat acute forms of brain injury. But he warns that it may be several years before this drug reaches the market. 'It's a long-term thing. There is no magic bullet, but we are very optimistic,' he says. The truth is that no matter how hard we try we'll probably never eliminate all the free radicals. Yet keeping them in check to avoid internal 'rusting' still sounds like a good idea, even for the least vain amongst us.

LISA MELTON  
SCIENCE WRITER-IN-RESIDENCE  
NOVARTIS FOUNDATION

*(This article originally appeared in The Times and has been reproduced by kind permission of the author.)*

# Endocrine Analyses: automatically advanced?

**We have seen great changes in the analytical methods applied to endocrinology over the years. In both research and clinical practice, changes have included assay characteristics as well as modes of operation. The most dramatic changes have been improvements in sensitivity and specificity. But the most significant change has been widespread automation.**

Increased awareness of the significance of hormonal pathology meant that many related tests entered routine clinical practice, and led to a demand for improvements. Automation has played an important role in achieving high throughput at the same time as lowering the cost per unit analysis. Improved precision and robustness have been additional benefits, because of a reduction in operator dependency.

Development of automated technology requires a large investment of both finance and time, which, in practical terms, can only come from the commercial sector. The high costs also lead to a very competitive market, with systems expanding to include more and more analyses. Withdrawal of less successful systems in the face of intense competition results in the minimum number of suppliers.

The growth of knowledge invariably arises from the working interface between experience and the problem to be resolved, guided by the presiding theories. For medicine, the main interface is between clinician and patient, though there are also many other interactions. It is important to recognise the complexities relating to the depth of experience at all levels. For example, the interaction between patient and GP is supported by knowledge from more specialist situations. Communication is clearly fundamental to progress. The more complete the communication, the more effective the growth of knowledge.

To appreciate the nature of scientific endeavour it is useful to compare the meaning of two words:

science and technology. 'Science' comes from the Latin for knowledge or understanding, while 'technology' is derived from classical Greek, meaning art or skill. The two are clearly distinct, although very much related when considering how knowledge grows. Knowledge can be defined simply as finding the unity in diversity. In other words, finding the law that underpins a number of disparate aspects. In practice, this is essentially a passive process. In contrast, the art of applying knowledge to a specific event is the realm of technology, and is much more active.

From experience, progress in scientific endeavour arises from a continual interplay of the two. The skilful application of understanding gives rise to further elucidation, leading to more extensive experience, in turn leading to more knowledge. Of course, the growth in knowledge makes specialisation increasingly inevitable. Communication between specialities becomes critical.

Disease, like all other aspects of life, reflects the universal principle of diversity. The pre-Socratic philosophers were the first to point out that constant change was a fundamental aspect of the universe. As Heraclitus said 'man cannot step into the same river twice'. Indeed, Hippocrates, the originator of Western medicine, began a tradition of treating each patient as a unique individual. So our knowledge needs to be progressive and appropriate to each situation, not static or definitive.

Our knowledge of hormonal activity began with an appreciation of biological function. Hormones were defined in terms of what they did. With time, particularly in response to the need for more precise measurement, there has been a shift towards definitions based on more physico-chemical characteristics or molecular structure. Perhaps there was a general idea that function is related to a single molecular entity.

For some hormones this might be

true but, undoubtedly for many, this would be an over-simplification. Many protein hormones, for example, are intrinsically heterogeneous, circulating in a number of biologically active forms. In addition, synergism and antagonistic effects are common. Our understanding is changing rapidly.

The introduction of sophisticated automated analysers has been a useful response to the prevailing demand for more work and reduced costs. But there are several consequences. First, information related to the analytical process becomes more difficult to access. We are all familiar with the role that discussion plays in arriving at a satisfactory interpretation. Quite often, questions need to be asked about the significance of a particular result, taking assay characteristics into account. These require an intimate knowledge of the method. With 'black box' technology, by definition, this information becomes more detached.

Furthermore, the development of the assay takes place away from the interface of clinician and scientist. When the real requirements of best clinical practice change, the links are tenuous. More importantly, the relocation of assay development to a more distant site removes the associated experience from the immediate environs of the health service. There is a strong argument that the most effective development takes place at the working interface. In terms of further research, to have little or no access to assay development would represent a significant loss.

Nonetheless, these are not insuperable difficulties. For example, commercial enterprises could expand their research capacity more directly in NHS departments. Nor is it necessary to avoid automation. It is simply a matter of retaining sufficient flexibility and the necessary experience to be flexible. As the ancient Greeks pointed out, the world does change. However, the change is gradual, and it is important that we retain a critical and intelligent response.

*The Society is pleased to have been able to support its members' attendance of these meetings.*

## 192nd Meeting of the Society for Endocrinology

*London, UK, December 2001*

This was a perfect opportunity to attend sessions relevant to my interests! I particularly enjoyed papers on the molecular evolution of regulatory peptides and transcription of corticosteroidogenic genes in human cerebellum and hippocampus. Professor Paul Stewart's lecture, 'A tale of two enzymes', was one of the best I have ever heard. The Young Endocrinologists Basic Science Review Lecture and 'How to write a good grant' were very helpful for scientific 'rookies' like me! I hope the Society will arrange more lectures on a variety of basic science research issues in future meetings.

PING YE

I attended the session on maternal and fetal responses to environmental challenges of feto-placental function, which was extremely interesting and relevant to my area of research. I particularly enjoyed Professor Julie Owens' talk on placental restriction. I would have appreciated more background information in some of the oral communications on reproduction, though I enjoyed seeing clinical work presented alongside basic science.

ALISON MOSTYN

The endocrinology of syndrome X and the maternal and fetal responses to environmental challenges of feto-placental function were both very interesting sessions, which have helped generate ideas for my research. The poster sessions provided a useful opportunity to meet and talk to other researchers.

GOSALA GOPALAKRISHNAN

I particularly enjoyed the coverage of receptor antagonists and the debate on management of metabolic disease. During my poster presentation, I met others involved in my area of work; it was exciting to discuss results, ideas and problems, and to consider possible future collaborations.

TALAT MUSHTAQ

I was struck by the large number of young researchers presenting their work. It is good to see that the Society's efforts to involve younger members are paying off. The plenary lectures are always a highlight of this meeting. Professor Paul Stewart's lecture on 11 $\beta$ -HSD seamlessly incorporated Richard Burton, Alexander the Great and Eastern

herbal remedies into a thought-provoking and entertaining story. Professor Michael Besser's summary of his career in abnormal GH secretion was an effective reminder of why we pursue research.

SCOTT MACKENZIE

The Young Endocrinologists session provided an extremely useful insight into grant applications. I also enjoyed the symposia on molecular evolutionary endocrinology and maternal and fetal responses to environmental challenges of feto-placental function, which were both relevant to my future research.

GIRITHARALINGHAM GNANALINGHAM

As ever, the plenary lectures were excellent. As a particularly skinny person with a huge appetite, I could relate to Iain Clarke's overview of how leptins can regulate appetite, energy expenditure and the neuroendocrine system! The Young Endocrinologists session was the highlight for me, particularly the session on grant proposals, which will be invaluable as I am now completing my PhD. I commend the Society for including so many young members in the Oral Communications sessions - speaking at these events is critical to our development.

KEVIN PFLEGER

## Nuclear Receptors in Health and Disease

*Strasbourg, France, September 2001*

Three presentations were particularly memorable. A Kalli spoke on PGC1, a co-factor that interacts with the AF-2 domain of many nuclear receptors. Evidence suggests that PGC1 may regulate glucocorticoid receptor activity in a cell type-specific manner. V Laudet discussed the phylogeny of nuclear receptors (NRs). Genome sequences indicate that there are 21 NRs in *Drosophila* and around 49 in humans. The cross-talk between thyroid hormone receptors and signalling pathways was discussed by A Aranda. Thyroid hormone antagonises RAS, IGF-I and EGF stimulation of the cyclin D1 promoter, but not PI3K or RSK2 signalling. Overall it was a very interesting and useful meeting.

CLARE HARVEY

## 9th Meeting of the European Placenta Group

*Sorrento, Italy, September 2001*

Plenary lectures on general topics in the morning were followed by specialised workshops later in the day, with much discussion. The workshop on cytogenetics of the placenta was particularly interesting. Data covered a wide range of animal models and highlighted important differences and considerations that need to be taken into account.

ALISON MILLER

I presented a poster on iodothyronine deiodinase expression in human placenta and the effects of intrauterine growth retardation, which was well received and sparked off discussions with scientists and clinicians. The keynote lectures and workshops were interesting and opened up my mind to new ways of approaching problems.

SHIAO CHAN

## 31st Annual Meeting of the Society for Neuroscience

*San Diego, CA, USA, November 2001*

The 'Stress and the brain' posters were most valuable to my research, and included HPA axis regulation, modulation of stress responses by forebrain structures, HPA-immune system interactions and effects of prenatal stress on the offspring. Another poster on actions of orexin in the brainstem had important implications for my current research. My poster attracted much attention, and reached a wide audience. I returned to the lab more confident and very enthusiastic about getting back to 'hands-on' work!

PAULA BRUNTON

# Hot Topics

Highlights from forthcoming articles in the Society's journals, brought to you by Adam Powell.

## Susceptibility genes for endocrine traits

'The benefits promised are great, but the progress to gene identification in multifactorial traits has been disappointing to date.' McCarthy's review of this huge area attempts to



answer why this is so. It describes many current and potential future techniques for identification of genes in complex traits. Examples from diabetes, obesity, Crohn's disease and elsewhere illustrate the problems and solutions in analysing disorders that can affect several regions of the body. Linkage disequilibria, human and animal models and positional cloning are discussed along with other techniques. Their application to population-wide problems, where each individual has different risk factors, is assessed in detail. Finally, future possibilities (such as personalised health care) and current limitations (like the lack of more sophisticated statistical tools or large population data) are clearly highlighted. 'With these, and other, advances we can expect the next decade to see many more complex traits yield their secrets to the gene-mappers.'

(See the full article in *Journal of Molecular Endocrinology* 28(2), April 2002)

## POMC processing and obesity

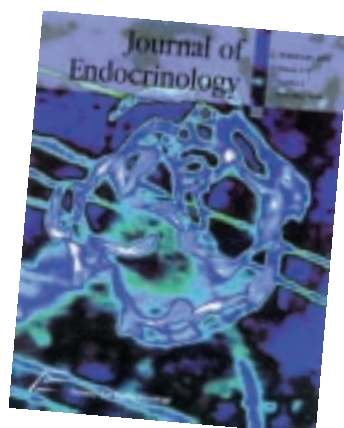
More than half the UK population is overweight or obese, and the demand

for anti-obesity therapies is very high. Melanocortin influences energy homeostasis and, consequently, much work has focused on the central melanocortin system, its regulation and the potential therapeutic value of drugs that act upon it. Here, Pritchard and colleagues expertly review the issues surrounding POMC biology. They highlight many of the problems that are encountered in elucidating the roles of POMC-derived peptides and precursors, their transcriptional regulation and the effects of post-translational processing. Once such questions have been addressed, pharmacological manipulation may allow appetite to be specifically suppressed.

(See the full article in *Journal of Endocrinology* 172(3), March 2002)

## Octreotide and renal growth in diabetic mice

Until recently, the streptozotocin (STZ) rat has been the experimental model for human diabetes, but STZ mice may present a better model. Grønbæk and co-workers have clearly confirmed that STZ mice mimic human changes in GH during type I (child-onset) diabetes, while rats do not. They extended their work to include the effect of octreotide, an analogue of the human hormone somatostatin, and showed that this inhibited the hypersecretion of GH and slowed renal and glomerular growth. Kidney



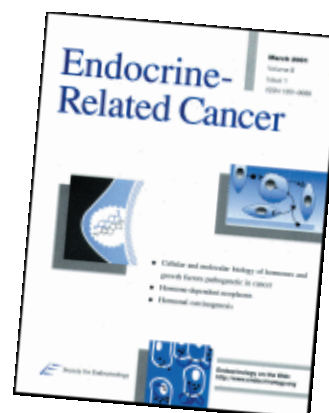
IGF-I levels were found to increase alongside these reductions. These results suggest significant roles for GH and IGF-I in the changes in kidney morphology and growth associated with diabetes. They underline the similarities and differences between

results from rats and mice. The better the model we have, the better it can be applied to provide help.

(See the full article in *Journal of Endocrinology* 172(3), March 2002)

## Breast cancer chemoprevention

Breast cancer is the most common cancer in women worldwide; in 2001 alone, it will have probably claimed over 500 000 lives. New treatments, techniques and strategies are appearing all the time, and Arun and Hortobagyi have excellently reviewed the current situation regarding chemoprevention. Many aspects of preventative drug use are clearly discussed, including identification of risk factors, trials in progress, medication available now



and that being tested, the effectiveness of surgery and the need for simple diagnostic tests. The only approved drug in chemoprevention, tamoxifen, is carefully compared with other contenders, such as raloxifene and cyclo-oxygenase inhibitors, each being more effective in some types of breast cancer, and less so in others. This summary covers a large number of papers and much trial data, in a way which does credit to the whole subject area.

(See the full article in *Endocrine-Related Cancer* 9(1), March 2002)

**Biochemical Society Meeting**

Edinburgh, UK, 8-10 April 2002.  
 Contact: Tel: +44-20-75803481; Fax: +44-20-76377626; E-mail: meetings@biochemistry.org; Web: <http://www.biochemistry.org/meetings>.

**BES 2002: 21st Joint Meeting of the British Endocrine Societies**

Harrogate, UK, 8-11 April 2002.  
 Contact: British Endocrine Societies, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: info@endocrinology.org; Web: <http://www.endocrinology.org>).

**International Meeting on Neuro-Psycho Endocrinology**

Rome, Italy, 19-20 April 2002.  
 Contact: MA Satta, Istituto di Endocrinologia, Policlinico A Gemelli, Largo A Gemelli 8, I-00168 Rome, Italy (Fax: +39-06-3012253; Email: md1964@mlink.it).

**IOF World Congress on Osteoporosis**

Lisbon, Portugal, 10-14 May 2002.  
 Contact: IOF Secretariat, 71 Cours Albert Thomas, F-69003 Lyon, France (Tel: +33-4-72914177; Fax: +33-4-72369052; Email: info@iofyon.org; Web: <http://www.osteofound.org>).

**Euroconference on Tissue Specification and Patterning during Development**

Grenada, Spain, 11-17 May 2002.  
 Contact: Dr J Hendekovic, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France (Tel: +33-3-88767135; Fax: +33-3-88366987; Email: euresco@esf.org; Web: <http://www.esf.org/euresco>).

**15th International Symposium of the Journal of Steroid Biochemistry and Molecular Biology on Recent Advances in Steroid Biochemistry and Molecular Biology**

Munich, Germany, 17-20 May 2002.  
 Contact: Prof. JR Pasqualini, Steroid Hormone Research Unit, Institut de Puériculture, 26 Boulevard Brune, F-75014 Paris, France (Tel: +33-1-45399109; Fax: +33-1-45426121; Email: jorge.pasqualini@wanadoo.fr).

**Euroconference on Normal Ageing, Longevity and Age-Related Diseases**

Spetses Island, Greece, 18-22 May 2002.  
 Contact: Dr J Hendekovic, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France (Tel: +33-3-88767135; Fax: +33-3-88366987; Email: euresco@esf.org; Web: <http://www.esf.org/euresco>).

**45ème Journées Internationales d'Endocrinologie Clinique: a Decade of Advances in Thyroidology**

Paris, France, 23-24 May 2002.  
 Contact: Dr G Copinschi, Laboratory of Experimental Medicine, Brussels Free University, CP 618, 808 Route de Lennik, B-1070 Brussels, Belgium (Tel: +32-2-5556238; Fax: +32-2-5556239; Email: klotz@ulb.ac.be).

**29th European Symposium on Calcified Tissues**

Zagreb, Croatia, 25-29 May 2002.  
 Contact: Janet Crompton, The Old White Hart, North Nibley, Dursley GL11 6DS, UK (Tel: +44-1453-549929; Fax: +44-1453-548919; Email: admin@ectsoc.org; Web: <http://www.ectsoc.org>).

**International Course on Laboratory Animal Science**

Utrecht, The Netherlands, 27 May-7 June 2002.  
 Contact: Professor LFM van Zutphen or Mr Stephan van Meulebrouck, Department of Laboratory Animal Science, Faculty of Veterinary Medicine, PO Box 80.166, 3508 TD Utrecht, The Netherlands (Tel: +31-30-2532033; Fax: +31-30-2537997; Email: pdk@las.vet.uu.nl).

**4th International Symposium on Hormone and Veterinary Drug Residue Analysis**

Antwerp, Belgium, 4-7 June 2002.  
 Contact: Prof. C Van Petteghem, Faculty of Pharmaceutical Sciences, University of Ghent, Harelbekestraat 72, B-9000 Ghent, Belgium (Tel: +32-9-2648134; Fax: +32-9-2648199; Email: carlos.vanpetteghem@rug.ac.be; Web: <http://allserv.rug.ac.be/~cvpettegh>).

**ENDO 2002: 84th Annual Meeting**

San Francisco, CA, USA, 19-22 June 2002.  
 Contact: Beverly Glover, Administrative Assistant, Meetings, The Endocrine Society, 4350 East West Highway, Suite 500, Bethesda, MD 20814-4410, USA (Tel: +1-301-9410220; Fax: +1-301-9410259; Email: bglover@endo-society.org; Web: <http://www.endo-society.org>).

**Bone and Tooth Society Annual Meeting**

Cardiff, UK, 24-26 June 2002.  
 Contact: Janet Crompton, The Old White Hart, North Nibley, Dursley GL11 6DS, UK (Tel: +44-1453-549929; Fax: +44-1453-548919; Email: janetcrompton@compuserve.com; Web: <http://www.batsoc.org.uk>).

**Society for Endocrinology Summer School**

Reading, UK, 9-12 July 2002.  
 Contact: Society for Endocrinology, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: info@endocrinology.org; Web: <http://www.endocrinology.org>).

**Society for Endocrinology Clinical Practice Day**

Reading, UK, 12 July 2002.  
 Contact: Society for Endocrinology, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: info@endocrinology.org; Web: <http://www.endocrinology.org>).

**6th International Symposium on the Neurobiology and Neuroendocrinology of Aging**

Bregenz, Austria, 21-26 July 2002.  
 Contact: Richard Falvo or Andrzej Bartke, Department of Physiology, LS II, Rm 245, Southern Illinois University, School of Medicine, Carbondale, IL 62901-6512, USA (Fax: +1-618-4531517; Email: abartke@siumed.edu or rfalvo@siumed.edu; Web: <http://www.neurobiology-and-neuroendocrinology-of-aging.org/>).

**21st Conference of European Comparative Endocrinologists**

Bonn, Germany, 26-31 August 2002.  
 Contact: 21st CECE, c/o Institute of Zoophysiology, Endenicher Allee 11-13, D-53115 Bonn, Germany (Fax: +49-228-732496; Email: esce2002@uni-bonn.de; Web: <http://www.esce2002.uni-bonn.de>).

**5th International Congress of Neuroendocrinology**

Bristol, UK, 31 August-4 September 2002.  
 Contact: BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: icn2002@endocrinology.org; Web: <http://www.bioscientifica.com/icn2002.htm>).

**Signalling the Future, Celebrating 100 years of Biochemistry in Liverpool and the UK**

Liverpool, UK, 3-6 September 2002.  
 Contact: Dr Andrew Bates, School of Biological Sciences, University of Liverpool, Life Sciences Building, Crown Street, Liverpool L69 7ZB, UK (Tel: +44-151-7944322; Fax: +44-151-7944349; Web: <http://www.signal2002.com/>).

**28th Meeting of the European Thyroid Association**

Göteborg, Sweden, 8-11 September 2002.  
 Contact: Dr Ernst Nystrom (Email: euro-thyroid-assoc@cf.ac.uk).

**Society for Endocrinology Endocrine Nurses Training Course**

Cambridge, UK, 9-11 September 2002.  
 Contact: Society for Endocrinology, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: info@endocrinology.org; Web: <http://www.endocrinology.org>).

**5th International Congress of the International Society for Neuroimmunomodulation**

Montpellier, France, 9-11 September 2002.  
 Contact: Craig C Smith, Integrative Neural Immune Program, National Institute of Mental Health, 36 Convent Drive, Rm 1A23 MSC 4020, Bethesda, MD 20892-4020, USA (Tel: +1-301-4964561; Fax: +1-301-4966095; Email: ccs@codon.nih.gov).

**10th Meeting of the European Neuroendocrine Association**

Munich, Germany, 12-14 September 2002.  
 Contact: Prof AB Grossman, Department of Endocrinology, St Bartholomew's Hospital, London EC1A 7BE, UK (Email: secretary@eneassoc.org; Web: <http://www.enea2002.de>).

**4th World Congress on Stress**

Edinburgh, UK, 12-15 September 2002.  
 Contact: Northern Networking, 1 Tennant Avenue, East Kilbride, Glasgow G74 5NA, UK (Tel: +44-1355-244966; Fax: +44-1355-249959; Email: stress@glasconf.demon.co.uk; Web: <http://www.stressconf.co.uk>).

**2nd European Congress of Andrology**

Malmö, Sweden, 19-22 September 2002.  
 Contact: Malmö Kongressbyrå, St Gertrud, Östergatan 3, 21125 Malmö, Sweden (Tel: +46-40-258550; Fax: +46-40-258559; Email: info@malmo-congress.com; Web: <http://www.malmo-congress.com>).

**12th Asia-Oceania Congress of Endocrinology**

Taipei, Taiwan, 20-24 September 2002.  
 Contact: PO Box 68-439, Taipei, Taiwan (Tel: +886-2-25236017; Fax: +886-2-25377479; Email: tcm@ms5.hinet.net).

**24th Annual Meeting of the American Society for Bone and Mineral Research**

San Antonio, TX, USA, 20-24 September 2002.  
 Contact: Tel: +1-202-3671161; Email: asbmr@dc.sba.com; Web: <http://www.asbmr.org>.

**4th International Symposium on Physiology and Behaviour of Zoo and Wildlife Animals**

Berlin, Germany, 29 September-2 October 2002.  
 Contact: Institute for Zoo Biology and Wildlife Research, Alfred-Kowalke-Str. 17, 10315 Berlin, Germany (Tel: +49-30-5168608; Fax: +49-30-5126104; Email: symposium@IZW-Berlin.de; Web: <http://www.izw-berlin.de>).

**Joint Scientific Meeting of the Royal College of Obstetricians and Gynaecologists and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists**

Sydney, NSW, Australia, 2-4 October 2002.  
 Contact: Best for Women Conference Secretariat, GPO Box 2609, Sydney, NSW 2001, Australia (Tel: +61-2-92411478; Fax: +61-2-92513552; E-mail: obgy@icmsaust.com.au; Web: <http://www.bestforwomen.conf.au>).

**26th Congress of Endocrinology of SMEDIAN, the Moroccan Society of Endocrinology**

Rabat, Morocco, 3-6 October 2002.  
 Contact: Dr Fouad Rkiouak, 3 Rue Al Achâari, Appt 7, Agdal, Rabat, Morocco (Tel/Fax: +212-37-772436).

### Neuroendocrine-Immune Interactions Euroconference on Molecular Mechanisms and Clinical Relevance of Brain-Immune Communication

San Feliu de Guixols, Spain, 5-10 October 2002.  
*Contact:* Dr J Hendekovic, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France (Tel: +33-3-88767135; Fax: +33-3-88366987; Email: euresco@esf.org; Web: <http://www.esf.org/euresco>).

### Clinical Endocrinology Update: 2002

Portland, OR, USA, 6-9 October 2002.  
*Contact:* Beverly Glover, Administrative Assistant, Meetings, The Endocrine Society, 4350 East West Highway, Suite 500, Bethesda, MD 20814-4410, USA (Tel: +1-301-9410220; Fax: +1-301-9410259; Email: bglover@endo-society.org; Web: <http://www.endo-society.org>).

### 58th Annual Meeting of the American Society for Reproductive Medicine (ASRM 2002)

Seattle, WA, USA, 12-17 October 2002.  
*Contact:* ASRM, 1209 Montgomery Highway, Birmingham, AL 35216-2809, USA (Tel: +1-205-9785000; Fax: +1-205-9785018; Email: asrm@asrm.org).

### Euroconference on Trafficking and Signal Transduction

San Feliu de Guixols, Spain, 12-17 October 2002.  
*Contact:* Dr J Hendekovic, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France (Tel: +33-3-88767135; Fax: +33-3-88366987; Email: euresco@esf.org; Web: <http://www.esf.org/euresco>).

### Peptides and Non-peptides of Neuroendocrine and Oncologic Relevance

Como, Italy, 17-19 October 2002.  
*Contact:* Eugenio E Müller, Department of Pharmacology, University of Milan, Via Vanvitelli 32, 20129 Milan, Italy (Tel: +39-02-58357010/7012; Fax: +39-02-58357011; Email: eugenio.muller@unimi.it).

### 193rd Meeting of the Society for Endocrinology

London, UK, 4-6 November 2002.  
*Contact:* Society for Endocrinology, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642210; Fax: +44-1454-642222; Email: conferences@endocrinology.org; Web: <http://www.endocrinology.org>).

### 30th Meeting of the British Society for Paediatric Endocrinology and Diabetes 2002

Plymouth, UK, 13-15 November 2002.  
*Contact:* BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642210; Fax: +44-1454-642222; Email: info@endocrinology.org; Web: <http://www.bspe.shef.ac.uk>).

### 2nd International Symposium on Progestins, Progesterone Receptor Modulators and Progesterone Antagonists

Siena, Italy, 20-23 November 2002.  
*Contact:* Tzina Lindenberg (Tel: +972-2-6555188; Fax: +972-2-6522018; E-mail: hormones@netmedia.net.il; Web: <http://www.unisi.it/eventi/progestins>).

### BES 2003: 22nd Joint Meeting of the British Endocrine Societies

Glasgow, UK, 24-27 March 2003.  
*Contact:* British Endocrine Societies, 17/18 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642200; Fax: +44-1454-642222; Email: info@endocrinology.org).

### 4th International Workshop on Molecular Steroidogenesis

Bath, UK, 24-27 April 2003.  
*Contact:* Helen Gregson or Liz Brookes, BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ,

UK (Tel: +44-1454-642212; Fax: +44-1454-642222; Email: molster03@endocrinology.org; Web: <http://www.eurosterone.org/serono/index.htm>).

### 6th European Congress of Endocrinology

Lyon, France, 24-30 April 2003.  
*Contact:* Congress Agency Scientific Secretariat, Transit Communications, 18 Place Tolozan, F-69001 Lyon, France (Tel: +33-4-72985858; Fax: +33-4-72985898; Email: info@endocrinology2003.com; Web: <http://www.endocrinology2003.com>).

### International Symposium on Aldosterone

London, UK, 28-30 April 2003.  
*Contact:* Helen Gregson or Liz Brookes, BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK (Tel: +44-1454-642212; Fax: +44-1454-642222; Email: aldo-03@endocrinology.org; Web: <http://www.bioscientifica.com/aldo03>).

### 30th European Symposium on Calcified Tissues

Rome, Italy, 8-12 May 2003.  
*Contact:* Janet Crompton, The Old White Hart, North Nibley, Dursley GL11 6DS, UK (Tel: +44-1453-549929; Fax: +44-1453-548919; Email: admin@ectsoc.org; Web: <http://www.ectsoc.org>).

### ENDO 2003: 85th Annual Meeting

Philadelphia, PA, USA, 4-7 June 2003.  
*Contact:* Beverly Glover, Administrative Assistant, Meetings, The Endocrine Society, 4350 East West Highway, Suite 500, Bethesda, MD 20814-4410, USA (Tel: +1-301-9410220; Fax: +1-301-9410259; Email: bglover@endo-society.org; Web: <http://www.endo-society.org>).

### Fertility 2003: Joint Meeting of the Society for Reproduction and Fertility, British Fertility Society and the British Androgen Society

Aberdeen, UK, 13-17 July 2003.  
*Contact:* Victoria Withy or Helen Gregson, BioScientifica Ltd, 16 The Courtyard, Woodlands, Bradley Stoke, Bristol BS32 4NQ, UK

(Tel: +44-1454-642200; Fax: +44-1454-642222; Email [info@endocrinology.org](mailto:info@endocrinology.org)).

**25th Annual Meeting of the American Society for Bone and Mineral Research**  
Minneapolis, MN, USA, 19-23 September 2003.  
*Contact:* Tel: +1-202-3671161; Email: [asbmr@dc.sba.com](mailto:asbmr@dc.sba.com); Web: <http://www.asbmr.org>.

### 59th Annual Meeting of the American Society for Reproductive Medicine (ASRM 2003)

San Antonio, TX, USA, 11-16 October 2003.  
*Contact:* ASRM, 1209 Montgomery Highway, Birmingham, AL 35216-2809, USA (Tel: +1-205-9785000; Fax: +1-205-9785018; Email: [asrm@asrm.org](mailto:asrm@asrm.org)).

### ENDO 2004: 86th Annual Meeting

New Orleans, LA, USA, 16-19 June 2004.  
*Contact:* Beverly Glover, Administrative Assistant, Meetings, The Endocrine Society, 4350 East West Highway, Suite 500, Bethesda, MD 20814-4410, USA (Tel: +1-301-9410220; Fax: +1-301-9410259; Email: [bglover@endo-society.org](mailto:bglover@endo-society.org); Web: <http://www.endo-society.org>).

### International Society of Endocrinology Congress 2004

Lisbon, Portugal, 1-4 September 2004.  
*Contact:* ISE, Department of Chemical Endocrinology, 51-53 Bartholomew Close, London EC1A 7BE, UK (Tel: +44-20-76064012; Fax: +44-20-77964676).

### 30th Annual Meeting of the European Thyroid Association

Istanbul, Turkey, 18-22 September 2004.  
*Contact:* Prof. Gurbuz Erdogan (Email: [gurbuz.erdogan@temd.org.tr](mailto:gurbuz.erdogan@temd.org.tr)).

### 60th Annual Meeting of the American Society for Reproductive Medicine (ASRM 2004)

Philadelphia, PA, USA, 16-21 October 2004.  
*Contact:* ASRM, 1209 Montgomery Highway, Birmingham, AL 35216-2809, USA (Tel: +1-205-9785000; Fax: +1-205-9785018; Email: [asrm@asrm.org](mailto:asrm@asrm.org)).

# NETRIA Training Course

## Development of enzyme-labelled microtitre-plate immunoassays for research applications

- A 5-day workshop held every 2 months
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### Lectures:

Principles of immunoassay  
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Conjugation methods  
Choosing antibodies - significant features  
Significance of solid-phase reagents

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Quality control and assay monitoring  
Validation of assay performance  
Troubleshooting

### Practical work:

Basic ELISA tests (EIA and IEMA)  
Preparation and purification of enzyme conjugates (both antigens and antibodies)  
Testing and titration of conjugates  
Storage of conjugates  
Optimising antibody concentration and assay parameters  
Chemiluminescence formats

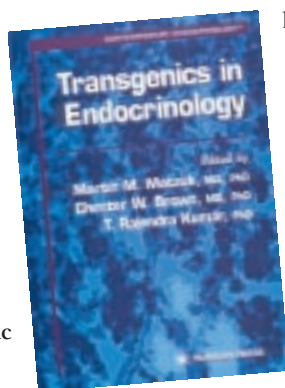
Contact Dr Ray Edwards or Sharon Ajodha for further information  
(Tel: 020-76062113; Email: [netria@medscape.com](mailto:netria@medscape.com))

## Transgenics in Endocrinology

Eds Martin M Matzuk, Chester W Brown & T Rajendra Kumar, Humana Press, 2001, 480 pp, \$175, ISBN 0-89603-764-9

Twenty years ago, the covers of *Nature* and *Science* were emblazoned with giant mice, resulting from the incorporation of foreign GH genes driven by mouse metallothionein I promoters. A few years later, knockouts were on the way. Embryonic stem cell lines had been isolated, and Dr Capecchi risked all in his belief that homologous recombination and positive/negative selection would allow the disruption of specific genes in mouse models. The past two decades have seen an explosion of interest in the field, and thousands of transgenic mice have been created.

This book reviews the last 20 years of transgenic technology as applied to various endocrine systems. The first chapter is a relatively straightforward and simplistic review



of some of the techniques available, culminating in some of the newer techniques of ICSI and nuclear transfer technology (which sounds somehow less frightening than cloning). The subsequent chapters are stand-alone state of the art reviews of specific areas in endocrine transgenesis, all written by leaders in the field. Chapters cover sexual development and differentiation, control of gonadal function, steroidogenesis, progesterone, mammary gland

development and prolactin, the POMC neuroendocrine system and so on. Reviews include the effects of targeted disruption of genes involved in control of growth and obesity and deletion of insulin/IGF ligands and receptors. I found the chapter on skeleton biology particularly fascinating. This provides an excellent review of processes and

genes involved in bone patterning and development. As a non-bone biologist, I was particularly pleased to learn that the effect of BMP on growth plate size is controlled by its endogenous antagonist, noggin.

My only criticism is that, as ever, a book that attempts to review such a rapidly advancing field is out of date before it is published. I should imagine most of the reviews were with the editors by mid-1999, and a lot has happened since then. Some chapters do have additional (post-draft) recommended reading sections, highlighting newer important references. It is a shame that there is not much on conditional knockouts (e.g. Cre-lox P) which allow tissue-specific gene manipulation and other models which are inducible and which can be temporally restricted. Nevertheless, this is a minor problem, and as a review of the advances made in the last two decades of the 20th century, this is a fascinating text and a great read.

JOHN MIELL

## Two-Hybrid Systems: Methods and Protocols

(Methods in Molecular Biology Volume 177)

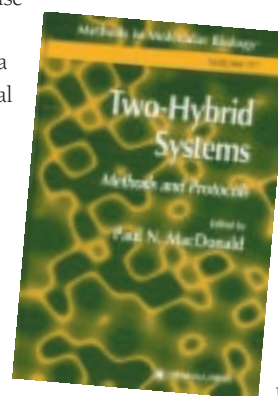
Ed. Paul N MacDonald, Humana Press, 2001, 336 pp, \$99.50, ISBN 0-89603-832-7

Following completion of the human genome project, attention has focused on what the 27 000 gene products might do, and how such a small number of genes can give rise to such complex organisms as human beings. We have begun to think of proteins as building blocks either of metabolic pathways or macromolecular machines. It is therefore interesting to identify protein partners.

One of the most powerful techniques for doing this has been the yeast two-hybrid system. Since its original description, a number of refinements have been made, resulting in a system that is easier to use and

which can be fine-tuned for particular activities. There are a number of downsides to using the yeast two-hybrid system, including the necessity of having proteins resident in the nucleus, relying on the indirect endpoint of gene transcription, and expressing the proteins in yeast, which may not modify expressed proteins in the same way as mammalian cells. In addition, as with any screening approach, the spectre of false positives looms large.

This current volume is a practical, laboratory manual with detailed methods and trouble-shooting tips for the yeast two-hybrid approach. The volume includes a brief historical overview, with chapters addressing yeast husbandry and media preparation and yeast genetic modification. The manual also includes detailed accounts of how to construct a two-hybrid screen and how to analyse the positives. One section has been written by various



investigators who have successfully used the yeast two-hybrid assay to find partners for their particular proteins of interest. The manual concludes with a brief overview of alternative strategies for identifying protein partners.

I found the book easy to read, and the protocols were clear and straightforward to follow. There are a number of useful tables, including yeast genotypes and genetic markers, as

well as tables of available vectors. The book's one irritating feature is the frequency of spelling errors. It would have benefited from a sub-editor's eye! I would recommend this book as a practical laboratory manual for anyone contemplating a search for a partner protein using the yeast two-hybrid approach. Even with the wide availability of convenient kits from biotech companies, this manual is a valuable aid.

DAVID RAY